A Digital Story from Mars

Overview

This Imagine Mars activity series was developed by the Northpointe Housing and Urban Development Neighborhood Network. It was experienced by about 20 students, ages 11-17 during the spring of 2005. The facilitators included: volunteers from the Mars Public Engagement Imagine Mars team at JPL, the Northpointe Resource Center and the Corporate Kids CyberKlub.

This project plan takes students through the five Imagine Mars steps of Reflect, Imagine, Discover, Create and Share. Each step includes an activity and a guest speaker. The final project is a "digital story" explaining the creation of the community, how it is similar and different from their home community, and how members survive on the harsh planet of Mars.

We invited local civic leaders, artists and community members to participate in various phases of the project and to celebrate with the students at the project's culminating "Share" event.

We followed the following schedule:

Days:	Tuesdays and Thursdays
Times:	5:00 – 6:30 p.m.
Duration:	Fourteen (14) sessions
Age Range:	11-17
Number of Youth	up to 20 participants – working in 4 teams of 5

Facilitation

Our intention was to build a team of educators, artists and scientists to work with students throughout the project. Our team included Solar System Educators, Solar System Ambassadors, local community members and scientists/engineers from the Jet Propulsion Laboratory.

Project Specifics

SESSION #1

Kick-Off Event

Objective: To inform the Northpointe residents about the program and invite them to sign up their youth. To gain buy-in from the residents.

Activity: This was an introduction to the project. Mars exhibits (borrowed from JPL), video stations and refreshments filled the room. The program included an introduction to the Imagine Mars project, a speaker about Mars and its missions and a review of the HUD-specific Imagine Mars project. We highlighted that the students

would interact with scientists and engineers from NASA, that they would be focusing on community and that their project would culminate with a digital story about their Martian community that they would share at a final celebration, possibly a webcast, and eventually at the National conference in June.

We encouraged students to think of themselves as a special team, commissioned by NASA to build a community on Mars. We emphasized that everything they would do for the next 9 weeks was investigative research that would help them decide how they wanted the new community to exist and function.

Details: Agenda:

7:00 p.m.	Ice Breaker
7:10 p.m.	Welcome and Introductions
7:20 p.m.	Imagine Mars Project Overview
7:30 p.m.	Mars: Planet/Mission Overview (Solar System Ambassador could do this) 6 minutes of terror video (available from JPL)
7:45 p.m.	Day-by-Day overview of project plan
7:55 p.m.	Questions/Mingling

PHASE I – REFLECT

Objective: Reflect on home community.
Students should consider the following questions during this phase: What defines a community? What communities are we a part of? What makes your community unique? Why do you like living there? What do you think should change?

Tasks:

- **Define 3 things about your home community that you would like to stay the same on Mars.**
- **Define 3 things about your home community that you would like to change on Mars.**
- **Name Futuristic Martian Community**
- **Create Mission Statement for New Community (powerpoint)**

SESSION #2

Objective:

To help students to think about their home community, its history and the people who keep it thriving. To introduce students to the art of storytelling. To prepare to interview the elders in their home community.

Activity: Students heard from a professional storyteller about the early history/settlement of African Americans in Long Beach. This introduced them to some information about their community, helped them think about the difficulty of settling a new place, and familiarized them with the art of storytelling. Students then discussed the elements of interviewing and considered what information they might get from the older residents in their community. Students prepared questions for their community members.

Details:

5:00 p.m.	Arrival
5:05 p.m.	Welcome
5:10 p.m.	Storyteller/ Story
5:40 p.m.	Draw images from the story that they just heard – what pictures did the story create in their heads?
5:55 p.m.	Intro to Interviewing – why would we want to talk to older residents? Tips on Interviews (below).
6:05 p.m.	Prepare questions for Elders

There are more ways to gather information than from your text or your teacher. Experts, grandparents, historians, scientists, authors, and many others all have interesting and important stories to tell. To get the most out of interviewing these people, you need to consider a few things that will help you get the most out of your interview.

Preparing for the Interview

1. Make an appointment with the person (it is rude to just show up and expect the person to give you their time).

2. Learn a little about the person before meeting him/her.

3. Know what you want to get out of the interview ahead of time.

4. Write your questions down before the interview, but be prepared to take a different path of questioning if necessary.

Conducting the Interview

1. Be on time, and be prepared with paper and pen/pencil.

2. Be friendly and courteous - remember they are giving you their valuable time!

3. Ask your questions clearly.

4. Don't interrupt!

5. Ask specific, thought-provoking questions. Avoid yes/no questions.

6. Try to stay focused, but if something interesting comes up go with it.

7. Take good notes. Ask the interviewee to repeat what they said if necessary, but only do this when it is something important.

8. Don't volunteer information unless it is to get the interview going, to get it back on track, or to give background information relevant to your goals.

9. Obtain all the information needed before ending the interview. If necessary, review your notes with the person.

10. Thank the interviewee for his/her time.

SESSION #3

Activity:

Students interviewed some of the older members of the Northpointe community. They were searching for understanding about how their community has changed over the years to help them decide how they want their community to exist on Mars. Students worked in their teams to create PowerPoint presentations that highlight 3 community elements that they wish to maintain on Mars, and 3 elements they will change.

Details

5:00 pm	Icebreaker: As students come in, each gets a small piece of paper with either a question or an answer on it. (exp: "How many moons does Mars have?" "Answer: 2, Phobos and Deimos") Students use the questions/answer pairs to find their partner Student pairs think of two things that are important to conducting an interview. Share Time
5:10 pm	Give students an overview of the evening: 1. Students will get into groups 2. Students will conduct interviews with elders using questions from last week and record responses. 3. Students will discuss the interviews and come up with 3 community elements they want to change on Mars and 3 things that will stay the same
5:15 pm	Panel Interview – students each ask questions of the panel of community elders.
5:30 pm	Students re-group and discuss at least three elements to change and 3 elements to stay the same.
5:45 pm	Students create PowerPoint
6:20 pm	Students share with another group.

SESSION #4

Activity:

A NASA engineer shared some info on the NASA community, and how NASA employees are guided by the NASA mission statement and vision. Students discussed what a mission statement is and why it is important for a company or community to have one. Students worked in their teams of 5 to name their communities, and to discuss what they think should be represented in their

community's mission statement. Then, they finalized the mission statement, and designed a PowerPoint layout for the statement.
Our futuristic community will. . . . .
This will be created in PowerPoint.

Details:

5:00 p.m.	Introduction
5:05 p.m.	NASA Engineer w/presentation
5:20 p.m.	Team Discussion: what should the mission statement be?
5:30 p.m.	Students work in teams of 5 to develop mission statement and create PowerPoint

PHASE II – DISCOVER

Objective: **Students should learn about the planet Mars and what elements will affect their futuristic community. Students should consider the following questions during this phase: How is Mars like Earth? How is it different? What environmental conditions on Mars might make it difficult to have a community there? What are some ways they could protect humans from the Martian elements?**

Tasks: **Identify and Document (via PowerPoint) the following for the Martian community:**

- **Location**
- **Housing**
- **Radiation/Temp. Protection Strategy**
- **Food and Water Production**
- **Transportation**

SESSION #5

Activity:

Our local Solar System Ambassador (http://www2.jpl.nasa.gov/ambassador/index.html) gave a Mars and Mars mission overview with PowerPoint presentations, videos and spacecraft models. Each student per community team was assigned a mission-specific role.
The roles:
Housing and Materials Specialist
Radiation and Temperature Protection Lead
Food and Water Development Expert
Transportation Specialist
Community Location Scout.
The students met with others in their role and were led by a scientist/engineer to consider how they will manage their specific community-need on Mars. They used Mars images, on-line connections to informational websites, and the knowledge of the scientist/engineer to begin to formulate their community plan.

Details:

5:00 p.m.	Arrive/Intro
5:10 p.m.	Presentation: Intro to Mars
5:30 p.m.	Get into groups – determine roles
5:35 p.m.	Specialists discuss with scientists and each other
6:00 p.m.	Re-group with community groups and make initial decisions about meeting the challenges the Martian

	environment will pose to their community (attached form)
6:05 p.m.	Groups work on PowerPoint defining their community elements.

OFFICIAL Imagine Mars community

Community Name: _____

Community Planning members: **(please Sign)**

Housing and Materials Specialist _____

Radiation and Temperature Protection _____

Food and Water Development Expert_____

Transportation Specialist _____

Community Location Scout _____

1. Where will you build your community? Why?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
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2. How will your community be protected from cold and radiation?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

3. Where will the first inhabitants live? What materials do you propose to use?

4. What will be the method of transportation on your community base?

5. How will you provide food and water for the community?

6. Any other information you would like to share regarding your community?

Activity:

Students re-grouped in their community groups and finalized their plans for the Martian community – Where would the community be built? What would they use for transportation? How would they be protected from radiation/temperature? What would they eat/drink? What would their buildings be made of? They answered these questions, and created slides in PowerPoint.

Details:

5:00 p.m.	Re-group and discuss
5:30 p.m.	Work on PowerPoint presentation
6:15 p.m.	Share with group

PHASE III– IMAGINE

Objective: **Students should imagine how their Martian community might be similar or different to their community on Earth. Students should consider the following questions during this phase: What career roles will need to be filled on Mars? Specifically, will we need Artists and Museums? Police and a jail? Government Leaders and a system of government? Schools and teachers? Hospitals and Doctors? How might they structure things differently on Mars? Would healthcare be free? Would they elect the government? Would kids go to school?**

Tasks: **Students should determine what community resources/services will exist as part of the new Martian community.**
Students should present the community elements they deem necessary via PowerPoint.

SESSION #7

Activity:

Students were presented with the following questions/ideas: What career roles will need to be filled on Mars? Specifically, will they need Artists and Museums? Police and a jail? Government Leaders and a system of government? Schools and teachers? Hospitals and Doctors? How might they structure things differently on Mars? Would healthcare be free? Would they elect the government? Would kids go to school?

Students had a few minutes in their community teams to discuss their thoughts. They formulated questions to ask expert panelists during the next session. These conversations would help them determine whether the role will be necessary on Mars and how it might be different.

Detail:

5:00 p.m.	Students review classified ads in newspaper (or online), find a job that interests them and informally share how it might be different on Mars.
5:15 p.m.	Leader provides introduction to next week's special guests and activity.
5:20 p.m.	Students work in community teams to determine what community services – and therefore, jobs – they want to (need to) provide for themselves.
5:50 p.m.	Students consider the fields of: Doctor, Teacher, Police Officer, Business Person, Artist, and Civic Leader. Will they be needed on Mars? In preparation for following week, students fill-out

form “We think that the career of _____ will/will not be necessary on Mars because _____. If it is on Mars, it will be different because _____.
Student teams must come up with 4 questions for each professional regarding their career on Earth and how it might exist on Mars.

SESSION #8

Activity:

We held a “Career Fair” where local community professionals sat at tables with either a scientist or engineer. We invited an artist, police officer, city official, teacher, doctor and business professional. Students had 10 minutes at each station to discuss what the career was like on Earth and how it might be different on Mars. Their objective was to make decisions about whether this would be a needed profession on Mars and how it might be different. Obviously this also introduced students to different career possibilities on Earth.

Details:

5:00 p.m.	Introduce all visitors
5:15 p.m.	Career Fair begins
6:15 p.m.	Closing: thank guests

SESSION #9

Activity:

Students determined the community services/resources that they will provide in their new community. Exp: police, hospital, school. Students created PowerPoint slides documenting what community services/resources their Martian community would provide and why.

Details:

5:00 p.m.	Assemble
5:05 p.m.	Make final decisions
5:30 p.m.	Work on PowerPoint presentation
6:15 p.m.	Share

PHASE IV– CREATE

Objective: **Students create a "digital story" about their new community that tells the audience where they live, how long they've been there, why they chose that spot, what life is like on Mars. The story should tell about the careers the inhabitants have, whether they miss their families, how they have survived the harsh Martian environment. During this create process, students should use everything they learned during the reflect, imagine and discover sections. They should be reminded to consider what they learned. They should be encouraged to investigate questions that come up during the create phase of the project.**

Tasks: **Create a digital story about their new martian community.**

SESSION #10

Activity:

Introduce the concept of digital storytelling and show examples.
Explain and discuss the elements of a story.
http://www.storycenter.org/index1.html
Students will determine guidelines for story – that is, what information does each story have to include? What is essential to understanding this new community?

Details:

5:00 p.m.	Assemble What's Your Favorite Story? Why? What makes it so good? (elements)
5:10 p.m.	Storytelling expert talks about the elements of a story.
5:30 p.m.	Students work in groups to determine important elements of their story.
6:15 p.m.	Informal sharing of elements each group identified.

Your Digital Story is YOUR OWN. Your team should make it however you'd like it to be. However, you will need to share some key elements of your community with the people back on Earth so that they understand what living on Mars was like.

Here are some things you **need** to include in your story:

SET THE PICTURE

1. CHARACTERS
2. A MAJOR HAPPENING/CRISIS
3. AN ENDING

GIVE SOME FACTS

4. What is your community's name?
5. What is your community's mission statement?
6. What things are the same as they on earth? Different?
7. Where is the community? Is it in a crater, on a mountain, underground, in a valley or at one of the poles? Is it nice to live there?
8. How have you protected the people from the high levels of radiation on Mars and the extremely cold temperature? Is it working? Are there challenges?
9. What does your community do about food and water? Do you have enough? Are you running out?
10. What are people doing on Mars for work? Include something about the government, education, healthcare, business, police or art.
11. What are the morals and ethics of the community – are people good citizens?
12. What are the relationships like? Are there families?

Here are some things you **could** include in your story.

1. **What did you become as a society?**
2. **What are the families and individuals like in your community?**
3. **What is a day like in your community?**
4. **What do you most like about your community?**
5. **What have been some of the important events in your community over the past years?**
6. **Which of those events have effected the community most and why?**
7. **How does what you hoped to be compare to what your community became?**
8. **What is happening now in the community and how do you feel about it?**
9. **How will the important event in your community end?**
10. **What do you want the listener to feel at the end of your story?**

SESSION #11

Activity:

Students begin to write text and compile images/video

SESSION #12

Activity:

Students continue to work on digital stories.

SESSION #13

Activity:

Finish digital story.

PHASE V– SHARE

Objective: **These final events give students an opportunity to share their final project with their home community, their community leaders and the world.**

Tasks: **Present their stories.**

SESSION #14

Activity: Final event at Northpointe Neighborhood Network

Details:

7:00 p.m.	Welcome and Overview
7:10 p.m.	Short Documentary of work
7:15 p.m.	Digital Stories
7:55 p.m.	Presentation of Awards
8:15 p.m.	Closing Remarks